

MISCELLANEOUS NOTES

Snake frequents the estuaries is established beyond doubt (Murthy 1977). Local fishermen call the Beaked Sea Snake 'Dushta Sarp' which in Oriya means a very bad snake, indicating the fear for the snake's deadly venom and its toxicity. Another noteworthy record made in the same trip is that of the Smooth Water Snake *Enhydris enhydris*, a juvenile (450 mm) of which was picked up from the shallow waters of the lake at Ghodedowda village.

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It may therefore be concluded that the specimens of the Dwarf Rock-Lizard, the Beaked Sea Snake, and the Smooth Water Snake are not only additions but also the first documented records from the Chilka lagoon.

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REFERENCES

- ANNANDALE, N. (1915): Fauna of the Chilka Lake Reptiles and Batrachia. *Mem. Ind. Mus.* 5: 167-174.
- MURTHY, T. S. N. (1977): On sea snakes occurring in Madras waters. *J. mar. biol. Ass. India* 19 (1): 68-72.
- SMITH, M. A. (1943): Fauna of British India, Ceylon and Burma. Reptilia and Amphibia. Vol III-Serpentes. Taylor and Francis. London. pp. 449-450.

20. RETENTION OF EGGS BY THE EMYDINE TURTLES *KACHUGA TECTUM TECTUM* AND *KACHUGA SMITHI*

Turtles are known to have a tendency to retain eggs either in the oviduct, cloacal bursa or in the abdominal cavity (Risley 1933, Cagle 1944, Cagle and Tihen 1948, Duda and Gupta 1978). The retention has been attributed to unfavourable weather conditions or lack of proper facilities for egg laying during laying season.

On 22.4.1977, a specimen of *Kachuga tectum tectum* was noted to have a shelled egg inside its highly distended right cloacal

bursa. The ovary looked spent and showed the presence of 11 ruptured follicles, 7 in the right and 4 in the left, all of which were at nearly the same stage of differentiation into corpora lutea. The oviducts were fully developed but, did not show any eggs within. In weight and measurements and external and internal features, the turtle looked a healthy normal female.

Judged from the number of the ruptured follicles in the two ovaries, the turtle had

obviously ovulated 11 eggs but laid only 10, the odd one having pushed its way into the cloacal bursa and got stranded here. The egg was 38 mm in its longest axis and 21 mm in its maximum girth, which compared favourably with normal eggs of the species. Additionally, a lot of intestinal debris had filled the cloacal bursa containing the egg. The left side cloacal bursa was, however, in a collapsed state and did not contain any filling material.

The finding of an egg inside the right cloacal bursa, in *Kachuga tectum tectum*, is almost identical to Dobie's (1968) finding of eggs in the urinary bladder in turtle, *Macrochelys temmincki*. He attributed such abnormal position of eggs in his turtle to some carapaceal deformity and consequent crowding of reproductive structure. In the *Kachuga tectum tectum*, on the contrary, carapace, orientation and spacing of internal viscera was normal and, therefore, could not have contributed to the wrong channelling of the egg into the cloacal bursa, nor could it be attributed to unusual simultaneous movement of two eggs from opposite oviducts into the cloaca leading to overcrowding. It appears that the presence of shelled eggs in any unorthodox situation is just a matter of accident.

While in a mature female of *Kachuga smithi*, a shelled egg (37×22 mm) was found present in the right oviduct, collected on April 4, 1978. No Corpora lutea, fresh or old were to be found in its ovaries.

Retention of a single egg in the oviduct of *Kachuga smithi* in the month of April, speaks for unseasonal presence and irregular deposition, because in this species the normal months of laying are from late August to the middle of November and clutch size ranges from 3 to 11 (Gupta 1979). Irregular deposition of eggs in turtles is already in record (Miller 1932) who reported about a gopher turtle that deposited egg on October 4, another on 7th, 2 on 8th, and 5th on the 30th of October. He contributed this irregular deposition to the unsatisfactory condition for laying. Additionally the retention of a solitary egg in the oviduct without any trace of corpora lutea in the ovaries may also indicate that the retained egg is a laggard which has failed to get deposited alongwith other members of its clutch. The last clutch has apparently oviposited quite sometime back sufficiently early to let all the corpora lutea to heal up. This odd observation may turn out to be an important one, because it tends to conflict with functional relationship between the Corpus luteum and the maintenance of eggs inside the oviduct.

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REFERENCES

- CAGLE, F. R. (1944): Sexual maturity of the female turtle, *Pseudemys elegans* (Wiod). *Amer. Nat.* 71: 481-487.
- & TIHEN, J. (1948): Retention of eggs by the turtle, *Deirochelys reticularis*. *Copeia*, 1948: 66.
- DOBIE, J. L. (1968): Shelled eggs in the bladder of an aligator snapping turtle, *Macrolemys temmincki*. *Herpetologica* 24(4): 328-330.
- DUDA, P. L. & GUPTA, V. K. (1978): Intra-abdominal retention of eggs by the soft-shelled turtle *Lissemys punctata punctata* (Bonnaterre). *Herp. Review*. 9(2): 46.
- GUPTA, V. K. (1979): Studies on the female reproductive organs of some fresh-water chelones from Jammu. Ph.D. Thesis. Jammu Univ. 352.
- MILLER, L. (1932): Notes on the desert tortoise (*Testudo agassizii*). *Trans. San Diego Soc. Nat. Hist.* 7: 187-208.
- RISLEY, P. L. (1933): Observations on the natural history of the common musk turtle, *Sternotherus odoratus* (Latreille). *Pap. Mich. Acad. Sci. Art. Lett.* 17: 685-711.

21. TURTLES USING DOMESTIC BUFFALOES AS BASKING RAFTS

(With a photograph)

While on a trip to Zainabad to see the Wild Ass last summer I was staying with Shri Shabir Malik. In front of his home there is a small tank that is used for washing clothes, buffaloes and cattle.

On the first day while photographing sandgrouse that frequent the tank, I saw a herd of

buffaloes being driven into the water.

As soon as they had submerged themselves I noticed a turtle clamber onto a buffalo's back! No sooner had I taken a picture of this curious relationship, I saw another two clamber onto the back of another buffalo.



Photo. 1. Turtle basking on buffalo back.